

ABSTRACT

A method is described for determining geometric errors of a rotary encoder with a plurality of increments that can be registered by a sensor, encoder being applied to an internal combustion engine and being mounted on a shaft which can be directly or indirectly set in motion by gas moments and moments of inertia. The invention profile of the angular velocity $\omega_{\text{mess}}(t)$ of the shaft is measured for a time-variable shaft speed, that the shaft speed signals obtained during the measurement are averaged and that the averaging process is carried out within a shaft speed range in which the effects of the gas moments and moments of inertia, which act on the shaft in the internal combustion engine, on the angular velocity of the crankshaft cancel each other out statistically, at least to a great extent and that geometric errors of the rotary encoder are determined on the basis of the profile of the angular velocity $\omega_{\text{mess}}(t)$.